Ex his obſervationibus invicem comparatis quantum ex hoc brevi intervallo inferri potuit adventum Mercurii ad medium ipſius ſemitæ in ſolis diſco Trigonometricè deduxi hora 6. 11′ 18″. poſt meridiem.

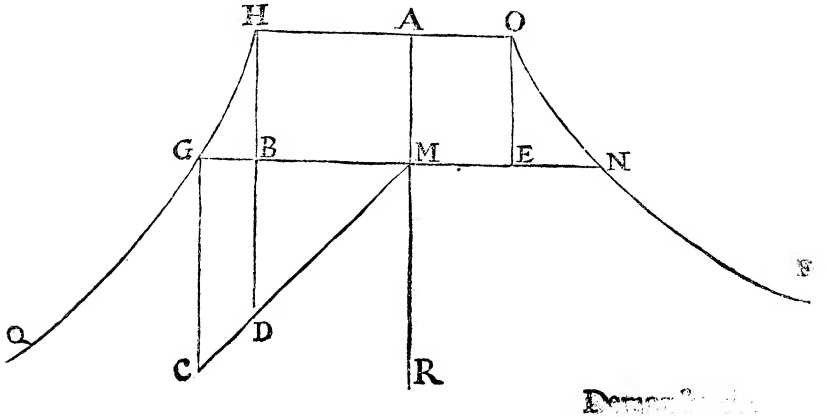
Nodum verò aſcendentem Mercurii in ♉ 14 42′. adhuc promotiorem quam per obſervationes anni 1677.

Inclinationem autem orbitæ Mercurii ad Eclipticam ex poſtremarum obſervationum comparatione inveni gr. 6. 23. quam nihilominus ob breve harum obſervationum intervallum præferre non auſim ei quam ex veſtris Sinenſibus obſervationibus longè majori intervallo diſtantibus deduxi.

VII. *Quadratura Logarithmicæ. Autore Jo. Craig.*

ESTO ONF Curva Logarithmica, cujus Aſymptotos AR, in qua tale ſumatur punctum A, ut ejus prima ordinata AO ſit ſubtangenti ſeu unitati æqualis: Quæritur ſpatium curvilineum AONM a duabus ordinatis AO, MN; abſciſsâ AM, & Curvâ Logarithmicâ ON comprehenſum.

Ex O ducatur OE ad AM parallela & ſecans MN in E; Dico quod rectangulum ex ſegmentis ME, EN ſit æquale ſpatio quæſito.



Demonſtratio. Vocetur Ordinata MN, Z; ſubtangens AO ſeu ME, s: & ad axem AR conſtruatur alia Curva HGE, cujus æquatio $2sz = x^2$, ubi ejus ordinata GM = x; dico quod ſit quadratrix Logarithmicæ juxta methodi meæ fundamentum; ſcil. ejus ſubnormalis eſt reſpectivæ hujus Ordinatæ æqualis: ut ex calculo iſtius methodi patebit: Ergo (juxta alibi à me expoſita) ſi ad G ducatur GC perpendicularis & æqualis lineæ GM, nec non HD parallela ad GC, & lineis GM, CM occurrens in B & D; erit trapezium GBDC = AONM. Sed GBDC = GMC — BMD = $\frac{1}{2}x^2 - \frac{1}{2}$ BMq = SZ — $\frac{1}{2}$ HAq; ſed HA = $\sqrt{2}$ AOq ex natura Curvæ HGQ, ergo GBDC = SZ — AOq = AO x MN — AOq = AO x MN — AO = ME x MN — ME = ME x EN; Ergo etiam AONM = ME x EN. Q. E. D.

Cum Methodum meam meam ad hujuſmodi Figuras applicarem; inveni Errorem aliquomodo in Calculum Bernoulianum irrepſiſſe, dum figuræ cujus æquatio $a^z = y^y$ Quadraturam aſſignat $\frac{2yyly - yy}{la}$ in pereximio ſuo Tractatu — De principiis Calculi Exponentialis; eſt enim iſtius figuræ, Area = $\frac{2yyly - yy}{4la}$; ubi y abſciſſam & z ordinatam deſignat.